What is claimed is:

1. A stereoscopic display device comprising:

at least one source of images which displays a plurality of images,

a beam splitter, and

a holographic optical element, wherein the beam splitter and the holographic optical element are configured to project the plurality of images onto corresponding different spaces.

2. The stereoscopic display device of claim 1, wherein the holographic optical element is a light reflective element having an aspherical lens function.

3. The stereoscopic display device of claim 1, wherein the holographic optical element is a light transmissive element having an aspherical lens function.

4. The stereoscopic display device of claim 1, wherein:

the at least one source of images comprises:

a first image source which displays a first image, and

a second image source which displays a second image;

the beam splitter transmits a portion of the first image and reflects another portion of the first image;

the holographic optical element has an aspherical lens function and reflects the transmitted portion of the first image back onto the beam splitter which further reflects the transmitted portion of the first image; and

the stereoscopic display device further comprises a second beam splitter which reflects the further reflected portion of the first image, projects the further reflected portion of the first image onto a first space and projects the second image onto a second space.

5. The stereoscopic display device of claim 1, wherein:

the at least one source of images comprises:

a first image source which displays a first image, and

a second image source which displays a second image;

the holographic element is a reflective holographic optical element which has an aspherical lens function and which reflects the first image; and

the beam splitter projects the reflected first image onto a first space and projects the second image onto a second space.

6. The stereoscopic display device of claim 1, wherein:

the at least one source of images comprises:

a first image source which displays a first image, and

a second image source which displays a second image;

the holographic optical element is a transmissive holographic optical element which has an aspherical lens function and which transmits the first image;

the beam splitter reflects the transmitted first image; and

the stereoscopic display device further comprises a second beam splitter which projects the reflected first image onto a first space and projects the second image onto a second space.

7. The stereoscopic display device of claim 1, wherein:

the at least one source of images comprises:

a first image source which displays a first image,

a second image source which displays a second image, and

a third image source which displays a third image;

the beam splitter transmits a portion of the first image and reflects another portion of the first image;

the holographic optical element is a reflective holographic optical element which has an aspherical lens function and which reflects the transmitted portion of the first image back onto the first beam splitter which further reflects the transmitted portion of the first image; and

the stereoscopic display device further comprises:

a second beam splitter which transmits a portion of the second image, reflects another portion of the second image and transmits the further reflected portion of the first image;

a second reflective holographic optical element which has an aspherical lens function and which reflects the transmitted portion of the second image back onto the second beam splitter which further reflects the transmitted portion of the second image;

a third beam splitter which projects the further reflected portion of the second image onto a first space, projects the further reflected portion of the first image onto a second space, and projects the third image onto a third space.

8. The stereoscopic display device of claim 1, wherein:

the at least one source of images comprises:

a first image source for displaying a first image,

a second image source for displaying a second image, and

a third image source for displaying a third image;

the holographic optical element is a first reflective holographic optical element which has an aspherical lens function and which reflects the first image;

the first beam splitter transmits a portion of the second image, reflects another portion of the second image, and transmits the reflected first image; and

the stereoscopic display device further comprises:

a second reflective holographic optical element which has an aspherical lens function and which reflects the transmitted portion of the second image back onto the beam splitter which further reflects the transmitted portion of the second image; and

a second beam splitter which projects the further reflected portion of the second image onto a first space, projects the reflected first image onto a second space, and projects the third image onto a third space.

9. A stereoscopic display device comprising:

an image source which displays a plurality of images;

a beam splitter; and

a holographic optical element, wherein the beam splitter and the holographic optical element project the plurality of images onto corresponding different spaces.

10. The stereoscopic display device of claim 9, wherein:

the image source displays first and second images;

the beam splitter transmits a portion of the first image;

the holographic optical element has an aspherical lens function and reflects the portion of the first image back onto the beam splitter which further reflects the portion of the first image; and

the stereoscopic display device further comprises a second beam splitter which reflects and projects the further reflected portion of the first image onto a first space and which projects the second image onto a second space.

11. The stereoscopic display device of claim 9, wherein:

the image source displays first and second images;

the holographic optical element is a reflective holographic optical element which has an aspherical lens function and which reflects the first image; and

the beam splitter projects the reflected first image onto a first space and projects the second image onto a second space.

12. The stereoscopic display device of claim 9, wherein:

the image source displays first and second images;

the holographic optical element is a transmissive holographic optical element which has an aspherical lens function and which transmits the first image;

the beam splitter reflects the transmitted first image; and

the stereoscopic display device further comprises a second beam splitter which projects the reflected first image onto a first space and projects the second image onto a second space.

13. The stereoscopic display device of claim 9, wherein:

the image source displays first, second and third images;

the beam splitter transmits a portion of the first image;

the holographic optical element is a reflective holographic optical element which has an aspherical lens function and which reflects the portion of the first image back onto the beam splitter which further reflects the portion of the first image; and

the stereoscopic display device further comprises:

a second beam splitter which transmits a portion of the second image and transmits the further reflected portion of the first image,

a second reflective holographic optical element which has an aspherical lens function and which reflects the portion of the second image back onto the second beam splitter which further reflects the portion of the second image, and

a third beam splitter which projects the further reflected portion of the second image onto a first space, projects the further reflected portion of the first image onto a second space, and projects the third image onto a third space.

14. The stereoscopic display device of claim 9, wherein:

the image source displays first, second and third images;

the holographic optical element is a reflective holographic optical element which has an aspherical lens function and which reflects the first image;

the beam splitter transmits a portion of the second image and transmits the reflected first image; and

the stereoscopic display device further comprises:

a second reflective holographic optical element which has an aspherical lens function and which reflects the portion of the second image back onto the beam splitter which further reflects the portion of the second image, and

a second beam splitter which projects the further reflected portion of the second image onto a first space, projects the reflected first image onto a second space, and projects the third image onto a third space.

15. A stereoscopic display device comprising:

a plurality of image sources;

at least one beam splitter; and

at least one holographic optical element, wherein the at least one beam splitter and the at least one holographic optical element are configured to project an image from each of the plurality of image sources onto a corresponding different space.

16. The stereoscopic display device of claim 15, wherein:

the plurality of image sources are arranged inline;

the at least one holographic optical element is a reflective holographic element having a spherical lens function and is arranged at an angle forming a "V" with respect to one of the plurality of image sources;

the at least one beam splitter is arranged at an angle forming a second "V" with respect to another of the plurality of image sources; and

a first image is communicated from the one of the plurality of image sources to a first space via the reflective holographic element and the at least one beam splitter and a second image is communicated from the another of the plurality of image sources to a second space via the at least one beam splitter.

17. The stereoscopic display device of claim 15, wherein:

the plurality of image sources are arranged inline;

the at least one holographic optical element is a reflective holographic element having a spherical lens function;

one of the plurality of image sources, a first of the at least one beam splitter and the at least one holographic optical element are arranged at relative angles forming an "N";

another of the plurality of image sources is arranged at an angle forming a "V" with respect to a second of the at least one beam splitter; and

a first image is communicated from the one of the plurality of image sources to a first space via the first of the at least one beam splitter, the at least one holographic element and the second of the at least one beam splitter and a second image is communicated from the another of the plurality of image sources to a second space via the second of the at least one beam splitter.

18. The stereoscopic display device of claim 15, wherein:

the plurality of image sources are arranged inline;

the at least one holographic optical element is a transmissive holographic element having a spherical lens function;

the at least one holographic optical element is arranged parallel to one of the plurality of image sources;

at least one holographic optical element and a first of the at least one beam splitter are arranged at a relative angle forming a "V";

another of the plurality of image sources is arranged at an angle forming a "V" with respect to a second of the at least one beam splitter; and

a first image is communicated from the one of the plurality of image sources to a first space via the at least one holographic element, the first of the at least one beam splitter, and the second of the at least one beam splitter and a second image is communicated from the another of the plurality of image sources to a second space via the second of the at least one beam splitter.

19. The stereoscopic display device of claim 15, wherein:

the plurality of image sources are arranged inline;

first and second of the at least one holographic optical element are each a reflective holographic element having a spherical lens function;

a first of the plurality of image sources, a first of the at least one beam splitter and the first of the at least one holographic optical element are arranged at relative angles forming a first "N" arrangement;

a second of the plurality of image sources, a second of the at least one beam splitter and the second of the at least one holographic optical element are arranged at relative angles forming a second "N" arrangement;

a third of the plurality of image sources is arranged at an angle forming a "V" arrangement with respect to a third of the at least one beam splitter; and

a first image is communicated from the first of the plurality of image sources to a first space via the first "N" arrangement and the second and third of the at least one beam splitter, a second image is communicated from the second of the plurality of image sources to a second space via the second "N" arrangement and the third of the at least one beam splitter, and a third image is communicated from the third of the plurality of image sources to a third space via the "V" arrangement.

20. The stereoscopic display device of claim 15, wherein:

the plurality of image sources are arranged inline;

first and second of the at least one holographic optical element are each a reflective holographic element having a spherical lens function;

a first of the plurality of image sources and the first of the at least one holographic optical element are arranged at relative angles forming a first "V" arrangement;

a second of the plurality of image sources, a first of the at least one beam splitter and the second of the at least one holographic optical element are arranged at relative angles forming an "N" arrangement;

a third of the plurality of image sources is arranged at an angle forming a second "V" arrangement with respect to a third of the at least one beam splitter; and

a first image is communicated from the first of the plurality of image sources to a first space via the first "V" arrangement, the first of the at least one beam splitter and the second of the at least one beam splitter, a second image is communicated from the second of the plurality of image sources to a second space via the "N" arrangement and the second of the at least one beam splitter, and a third image is communicated from the third of the plurality of image sources to a third space via the "V" arrangement.

21. The stereoscopic display device of claim 1, wherein the beam splitter is a holographic optical element.

22. The stereoscopic display device of claim 9, wherein the beam splitter is a holographic optical element.

23. The stereoscopic display device of claim 15, wherein the at least one beam splitter is a holographic optical element.

24. A stereoscopic display device comprising:

a plurality of image sources;

a beam splitter; and

a holographic optical element, wherein:

the beam splitter and the holographic optical element are arranged to project an image from each of the plurality of image sources onto a corresponding different space.

25. The stereoscopic display device of claim 24, wherein the beam splitter is a holographic optical element.

26. The stereoscopic display device of claim 24, wherein the beam splitter has a half mirror function.

27. The stereoscopic display device of claim 24, wherein:

a first of the plurality image sources displays a foreground image which is smaller in size than an image displayed by any of the other of the plurality of image sources.

28. The stereoscopic display device of claim 24, wherein:

a first of the plurality image sources displays a foreground image which is brighter than an image displayed by any of the other of the plurality of image sources.

29. The stereoscopic display device of claim 24, wherein each image is a still image.

30. The stereoscopic display device of claim 24, wherein at least one of the images is a moving image.

31. The stereoscopic display device of claim 24, wherein at least one of the image sources is a liquid crystal display.